



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,261	11/12/2003	Atsunori Kitazawa	Q78301	3189

23373 7590 10/02/2006
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

ROTH, LAURA K

ART UNIT	PAPER NUMBER
----------	--------------

2852

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,261	Applicant(s) KITAZAWA ET AL.	
	Examiner Laura K. Roth	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claim 9 is objected to because of the following informalities: the meaning of the phrase "monotonously increases" is not defined in the specification and the usage thereof appears to be contradictory to the generally accepted meaning of the term, wherein something is unvarying or unchanging. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al. (JP Pub 60-151681).

Regarding claim 9, Goto et al. (JP Pub 60-151681) teach a fixing device (fig.2) comprising: a heat contact member (fig.2, #9) arranged to be able to contact one side of a recording medium while heating the one side of the recording medium on which side an unfixed toner image is carried (fig.2, #9 will contact #20 on the side with #19), the toner image formed with a liquid developer including a toner dispersed in a carrier liquid; and a pressing member (fig.2, #13, #11, #15) pressing on the other side of said recording medium for pressing said recording medium against said heat contact member, the fixing device operating to fix said unfixed toner image to the one side of said recording medium by passing said recording medium through a nip portion defined

Art Unit: 2852

between said heat contact member and said pressing member(fig.2, nip portion defined along the perimeter of #9, following approximately the angle L), wherein said pressing member includes: two nip rollers (fig.2, #13 and #11) positioned at an inlet side and an exit side of the nip portion respectively and adjoining said heat contact member (fig.2, see relations); an endless belt run about said two nip rollers (fig.2, #15 around #11 and #13) and capable of moving in a cycling manner (fig.2, following arrow B); and a spring (fig.2, #17) strongly pressing said exit side nip roller against said heat contact member (abstract, CONSTITUTION, ln. 6), and establishes said nip portion by holding a part of an outside surface of said endless belt in pressure contact with said heat contact member (fig.2, see relationships); wherein said inlet side nip roller has a lower pressing force for pressing said endless belt against said heat contact member than a pressing force of said exit side nip roller for pressing said endless belt against said heat contact member (abstract, CONSTITUTION, ln. 6); and wherein the nip pressure in the nip portion monotonously increases from the inlet side to the exit side (abstract, CONSTITUTION, ln. 6: if the second pressure is larger, the pressure will increase from the inlet to the outlet).

Regarding claim 10, Goto et al. (JP Pub 60-151681) teach a fixing device wherein said heat contact member includes a heat roller (fig.2, #9 includes heater #10).

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanesawa et al. (US 5,666,624).

Art Unit: 2852

Regarding claim 9, Kanesawa et al. (US 5,666,624) teach a fixing device (fig.12) comprising: a heat contact member (fig.12, #101) arranged to be able to contact one side of a recording medium while heating the one side of the recording medium on which side an unfixed toner image is carried (fig.12, #101 will contact #107 on the side with #108), the toner image formed with a liquid developer including a toner dispersed in a carrier liquid (evidence for the use of a liquid toner in this type of fuser can be found in col.4, ln.1+ in which great concern is given to an expansion of vapor in a nip region); and a pressing member (fig.12, #125, #129, #115) pressing on the other side of said recording medium for pressing said recording medium against said heat contact member, the fixing device operating to fix said unfixed toner image to the one side of said recording medium by passing said recording medium through a nip portion defined between said heat contact member and said pressing member(fig.12, nip portion defined along the perimeter of #101, between the contact points of #125 and #129), wherein said pressing member includes: two nip rollers (fig.12, #125 and #129) positioned at an inlet side and an exit side of the nip portion respectively and adjoining said heat contact member (fig.12, see relations); an endless belt run about said two nip rollers (fig.12, #115 around #125 and #129) and capable of moving in a cycling manner (fig.12, following arrow); and a spring (fig.12, #126) strongly pressing said exit side nip roller against said heat contact member (fig.13, see pressing member), and establishes said nip portion by holding a part of an outside surface of said endless belt in pressure contact with said heat contact member (fig.12, see relationships); wherein said inlet side nip roller has a lower pressing force for pressing said endless belt against said heat

Art Unit: 2852

contact member than a pressing force of said exit side nip roller for pressing said endless belt against said heat contact member (fig.13); and wherein the nip pressure in the nip portion monotonously increases from the inlet side to the exit side (fig.13: the second pressure is larger, the pressure increases from the inlet to the outlet).

Regarding claim 10, Kanesawa et al. (US 5,666,624) teach a fixing device wherein said heat contact member includes a heat roller (fig.12, #101 includes heater #105).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto (US 6,148,169). in view of Kadokura et al. (US Pub. 2003/0039913) and in view of either Goto et al. (JP Pub 60-151681) or Kanesawa et al. (US 5,666,624).

Regarding claim 9, Tsukamoto (US 6,148,169) teaches a fixing device (fig.5) comprising: a heat contact member arranged to be able to contact one side of a recording medium while heating the one side of the recording medium on which side an unfixed toner image is carried (fig.5, #2 to contact toner side T of paper P), the toner image formed with a liquid developer including a toner dispersed in a carrier liquid (fig.7, #T, Tt dispersed in Tc; col.3, ln.50-54); and a pressing member pressing on the other side of said recording medium for pressing said recording medium against said heat contact member (fig.5, #12, #8, #11), the fixing device operating to fix said unfixed toner

Art Unit: 2852

image to the one side of said recording medium by passing said recording medium through a nip portion defined between said heat contact member and said pressing member (fig.5, nip formed in area of contact from contact of #11 with #2 to contact of #8 with #2), wherein said pressing member includes: two nip rollers (fig.5, #8 and #11) positioned at an inlet side and an exit side of the nip portion respectively and adjoining said heat contact member (fig.5, see relationship); an endless belt run about said two nip rollers (fig.5, #12) and capable of moving in a cycling manner; and establishes said nip portion by holding a part of an outside surface of said endless belt in pressure contact with said heat contact member (fig.5, see relationship; para.0041, ln.3-4).

Regarding claim 10, Tsukamoto (US 6,148,169) teaches a fixing device wherein said heat contact member includes a heat roller (fig.5, #2).

However, Tsukamoto (US 6,148,169) fails to teach a fixing device wherein a nip pressure at an inlet side of said nip portion is set lower than a nip pressure at an exit side and wherein the pressure increases from the inlet to the exit.

Regarding claim 9, Kadokura et al. (US Pub. 2003/0039913) teach a fixing device wherein a nip pressure at an inlet side of said nip portion is set lower than a nip pressure at an exit side of said nip portion such that a pressure increases from the inlet to the exit side (para.0044, ln.1-8).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the pressing member of the fixing device of Tsukamoto (US 6,148,169) with the increased pressure on the exit site of the nip as in Kadokura et al.

(US Pub. 2003/0039913) to improve the releasing property of the device without providing a large distortion (para.0044).

However, Tsukamoto (US 6,148,169) fails to teach a spring pressing said exit side nip roller.

Regarding claim 9, both Goto et al. (JP Pub 60-151681) and Kanesawa et al. (US 5,666,624) teach that it is known in the art to bias a pressure roller at an exit side of a nip using a spring to strongly press an exit side nip roller against a heat contact member (see fig.2, #17 and fig.12, #126, respectively).

It would have been obvious to one of ordinary skill in the art at the time of invention to support and urge the pressure roller in the fixing device of Tsukamoto (US 6,148,169) with a spring as seen in either Goto et al. (JP Pub 60-151681) and Kanesawa et al. (US 5,666,624) for reasons including but not limited to resiliently maintaining the pressure roller in contact with a heating member regardless of what thickness of paper is to be fixed during a given print job.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

Applicant's arguments with respect to claims 9 and 10 have been considered but are moot in view of the new ground(s) of rejection.

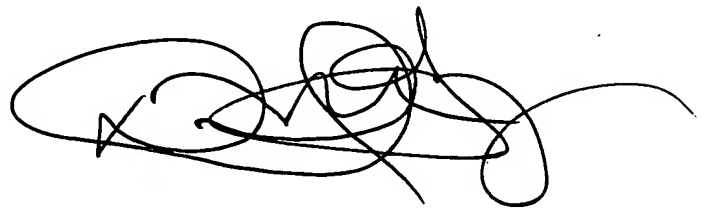
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura K. Roth whose telephone number is (571)272-2154. The examiner can normally be reached on Monday-Friday, 7:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571)272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LKR
9/26/2006

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

DAVID M. GRAY
SUPERVISORY PATENT EXAMINER